

M/035/015

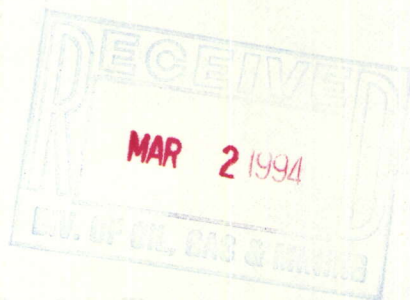
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Robert E. Dunne
Project Manager

Kennecott

February 24, 1994

Mr. Wayne Hedberg, Permit Supervisor
State of Utah Department of Natural Resources
Division of Oil, Gas, and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203



Dear Mr. Hedberg:

Subject: Soil Sampling - Recommended Suite of
Analysis Parameters

As discussed during the February 17, 1994 meeting, Kennecott Utah Copper will be initiating additional soils investigations in the proposed North Impoundment footprint. The intent of this effort is to provide additional definition of the soil types that are suitable for salvage and reuse. This effort will utilize existing KUC soil sampling information and additional soil sampling as needed to confirm or modify the SCS Regional Soil Survey maps. Preliminary plans include direct haul and placement of salvageable soils with no topsoil stockpiling.

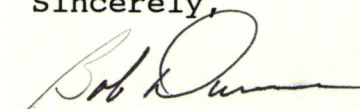
Soil samples will be sent to the Utah State University Analytical Laboratory for analysis. Analytical parameters will include:

Texture, pH, EC (conductivity), SAR (sodium adsorption ratio), Lime (CaCO_3 equivalent), CEC (Cation exchange capacity), Nitrate-N (available Nitrogen, ppm $\text{NO}_3\text{-N}$), P (Phosphorus), and K (Potassium).

Determination of suitable topsoil quantities within the proposed North Impoundment footprint will be based on the completed analytical results. Recommended concentrations or target levels for various soil constituents have been fairly well established for field crops grown in agricultural type soils. However, similar information is not readily available for native plants or soils. Analytical results of the soil sampling effort will be made available to the DOGM and suitable soil boundaries will be established with DOGM's concurrence.

If you have any questions, please give me a call.

Sincerely,



Bob Dunne

encl.

DD:dmd